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ABSTRACT

Brief, two-page abstracts are provided for 15 educational topics of interest to community college faculty, administrators, and staff. Each abstract is coded to indicate intended audience, subject category, and level of concern. The topics covered by the abstracts are: (1) five major components of teacher evaluation; (2) writing an abstract; (3) creating a positive, non-threatening learning environment for students; (4) the role of higher education in the 1980's; (5) techniques for improving initial contacts with individuals or groups; (6) the creative use of silence in group discussions; (7) Study Unlimited, a cooperative program of Black Hawk College (IL) and the River Bend Library System; (8) the American College Testing Program's College Outcomes Measures Project, which assesses general education competencies; (9) a new definition of literacy; (10) the use of standard error in achieving fair grading practices; (11) strategies, including participatory management, for institutional change; (12) the premises, organization, and benefits of the cluster college concept at Oakton Community College (IL); (13) applications of the Cloze Procedure; (14) the statistical indicators which predict change in the educational environment; and (15) organizing effective staff development programs. Each abstract provides references for further information. (JP)

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# *INNOVATION ABSTRACTS*

*Volume 1*

*Numbers 1 - 15*

*Edited by*

*Karen Watkins*

*National Institute for Staff and Organizational Development*

*North American Consortium*

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7. If we can answer further questions, please call our offices.

Karen Watkins

Ms. Karen Watkins, Editor
Innovation Abstracts
National Institute for Staff
and Organizational Development

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# Innovation Abstracts

National Institute for Staff and Organizational Development
North American Consortium

Vol. I, no. 1

## TEACHING EFFECTIVENESS: A RESEARCH-BASED ANALYSIS

At the Center for Research and Development in Higher Education at the University of California at Berkeley, Milton Hildebrand and R. C. Wilson have identified five cluster areas crucial to excellence in teaching. Developing a systematic evaluative procedure to test their hypothesis that the qualities that make for great teaching are not illusive, intangible, or non-quantifiable, they involved more than 1000 students and 100 faculty in the sorting process and discovered these five major component areas to be significant in monitoring teaching excellence:

Analytic/Synthetic Approach--Basically the teacher who has mastered this cluster of skills demonstrates a willingness to carry content past pedantic preoccupations and show origins, interrelated patterns, and implications of concepts that undergird facts. Scholarship is shown to couple learning with adventure.

Organization/Clarity--Here the presentation skills of the teacher value clarity, cohesiveness, sequence, and emphasis and are characterized by the well-chosen example and apt analogy. Although an instructor's verbal skills need not be flamboyant, they need to be effective.

Instructor-Group Interaction--This component describes the teacher's ability to orchestrate effectively in a group setting--to read signals as students telegraph their interest or lack of it, to elicit response effectively and then control the group process, basically creating a positive learning environment through such interaction.

Instructor-Individual Student Interaction--Very simply, this category reflects the teacher's need to indicate that she cares about her students. When such a teacher initiates one-to-one response with a student, genuine interest is communicated. If she greets him, calls his student by name, talks to him personally, the student will respond by valuing and respecting his teacher.

Dynamism/Enthusiasm--There is no substitute for a professional's eager interest in and love for teaching. Such interest recharges everyone's mental batteries. If students sense that an instructor's style and zest are authentic, they respond in kind.

Further, in their study Wilson and Hildebrand were able to draw most interesting inferences from their analysis of the characteristics of fine teaching. For example, teachers designated both "best" and "worst" by colleagues were generally judged competent in subject matter. Indeed, only one of the five cluster groups mentioned above deals specifically with competence in content. Perhaps even more surprising, "best" and "worst" teachers undertook the same general professional tasks, contributed comparable amounts of time to preparation, grading, etc. Nor did excellence in teaching seem to reflect grading procedures. In other words, whether a teacher was hard or easy did not significantly affect the evaluation process.

Thus elements long speculated about as requisite ingredients for high marks in teacher evaluation did not significantly weight results. As data were refined even further, certain types of students could be seen to value different qualities in their teachers. For example, students whose primary goal was upward mobility valued most the second component -- Organization/Clarity, while students whose primary educational goal was general personal development admired teachers who had developed considerable expertise in the third grouping -- Instructor-Group Interaction.

For those wishing to incorporate these findings into strategies to improve presentation techniques, consider that each of the five cluster areas in obvious or more subtle ways employs observable skills which might be evaluated by self-viewing on videotape. Also, this research underscores again the importance of attitude and manner in the teaching process and reminds us that the sharing of information between teacher and student achieves excellence when the personal elements of the exchange are valued.

Dr. Nancy Aymes
Associate Director for Information
National Institute for Staff and Organizational Development
University of Texas

For further information see

Hildebrand, Milton. "The Character and Skills of the Effective Professor." Journal of Higher Education, 44, 1973, pp. 41-50.



**Karen Watkins, Editor**

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# Innovation Abstracts

National Institute for Staff and Organizational Development
North American Consortium

Vol. I, no. 2

## WRITING AN ABSTRACT

### Characteristics of Innovations

Many faculty teaching in community colleges and universities have seen innovations (fads?) come and go. They've learned a new language only to have it become outdated a few years later. For more than a few, this has left a feeling of resistance to even the word "innovation." Everett Rogers, in The Diffusion of Innovations, discusses the characteristics of innovations which encourage people to use them. Based on research with county agricultural agents who were attempting to get farmers to use hybrid corn, Rogers identified not only the process of innovation adoption but key factors in the nature of the innovations the farmers accepted. He began by defining innovation not as a new technique, product or idea but rather as one which is perceived as new and advantageous to the person who will be using it. This focus on the practitioner's perceptions led him to ask what the desirable characteristics of an innovation might be. The characteristics he discovered were:

1. The perceived advantage of the innovation--an apparent utilitarian value--over what the individual is currently doing
2. The compatability of the innovation with the practitioner's values and past experiences
3. The accessibility of the innovation or the degree to which the innovation can be readily understood and used
4. Divisibility of the innovation, or the ability to try the innovation on a limited basis or to try parts of it before using the whole
5. The communicability of the innovation or the ease with which it can be clearly and accurately described and therefore visualized

These five characteristics are the characteristics the editors of Innovation Abstracts look for in selecting subjects for consideration.

### Types of Abstracts

Because people who have been using an innovation for some time have different information needs than non-users and because we want to respond to the needs of these different groups, this series will include a number of types of abstracts. Contributors may want to consider submitting several abstracts as a series over a period of time. The types include:

1. Basic introductions to an innovation (a definition or description with practical suggestions for use)
2. Descriptions of an innovative model program or project (a description of the program identification of key elements in the model, and suggestions of variations that might be used in adopting the model)
3. Annotated Bibliographies (bibliographic listings of useful publications in high interest areas which indicate to the user of the innovation what he or she will be helped to do by each selection)

4. Practical suggestions for managing use of an innovation (intended as a vehicle for long term users to share with new users some techniques they've found to make the transition from non-use to use smoother)
5. Innovative variations on existing programs or concepts (a description of the variation, an explanation of how it is a departure from the original innovation and how others can implement this improvement)
6. Research-based analyses of innovations and their effectiveness in improving instruction (a discussion of the background--the problem researched and the methodology [in lay terms]--the results, and an analysis of the implications of the results for users of the innovation)
7. Issues focused papers (factors affecting the teaching/learning process which are not innovations per se. Examples include the leadership skills needed by administrators to encourage use of an innovation, future trends which may affect use, etc. These papers will usually be more speculative than other kinds of abstracts)

Abstract Guidelines

Each abstract should include two major parts: 1) a description of the innovation and 2) a discussion of practical applications/implications, first steps for use, etc. Additional guidelines include

1. Audience--Written for staff developers, faculty, counselors or administrators or for special groups. This Abstract, for example, is intended for any faculty member, staff developer, researcher, administrator, etc. who might like to submit an abstract for possible use in this series.
2. Length--Should be no more than two pages (500 - 1000 words).
3. Style--Expressed in a clear and jargon-free manner, avoiding sexist language. When fidelity to the source demands a specialized term, definitions should be included.
4. Applicability--Should have potential for application in a number of areas and preferably be easily and inexpensively implemented.
5. Citations--One or two references listed in the "For Further Information" section of the abstract. Contributors are responsible for correctly citing materials from other sources. List yourself as a resource if, for example, you are abstracting a program or project.
6. Publication--Authors and, when appropriate, colleges, will be given a byline. Innovation Abstracts are not copyrighted and the editoral staff reserves the right to do final editing.

If you have an idea for Innovation Abstracts and would like to submit a potential abstract, please write Ms. Karen Watkins at the Program in Community College Education, The University of Texas at Austin, Austin, Texas 78712.

Ms. Karen Watkins
Editor, Innovation Abstracts
National Institute for Staff and Organizational Development

For further information see

Rogers, Everett. The Diffusion of Innovations. New York, NY: The Free Press, 1962, pp. 124-132.

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# Innovation Abstracts

National Institute for Staff and Organizational Development
North American Consortium

Vol. I, No. 3

## CREATING A POSITIVE LEARNING ENVIRONMENT

It is possible to create an environment for learning so powerful that low-achieving students stay in college, achieve passing marks in courses, and enjoy the experience!

Oscar Mink and I discovered key ingredients for achieving such a therapeutic environment and documented them in a three-year longitudinal study at the University of Texas at Austin funded by the National Institute for Mental Health. The study looks at the impact of selected environmental elements in twelve participating colleges and seeks to discover what elements in a college setting positively impact a student's retention, level of learning, and motivation.

In reviewing for Innovation Abstracts what we found, I am again struck by the fact that the message I have to share is based on basic human needs and expectations. It is not a complicated message, but neither is it easy to implement.

We found

* that a positive learning environment requires pervasive support throughout the institution. Faculty, counselors, administrators, trustees and support staff, all create the learning climate.
* that the formal organizational leader--the president--is the individual who sets the organization's tone. His or her support is crucial.
* that if the college takes seriously its primary goal of facilitating learning, it must (1) accommodate individual differences; (2) deal institutionally and organizationally with change; (3) and commit additional funds to staff development.
* that teacher expectations--what a teacher believes to be true of students--is probably the key factor in the design of a therapeutic learning environment.

To focus more closely on this key element is to speak of the reality of the impact of both positive and negative teacher expectations on student behavior. Thirty percent of all first-graders who begin the public school experience never graduate from high school; fifty percent of our best students who enroll in universities never graduate. If, as we believe, teacher expectations are the most powerful predictors of student success, then we have not communicated successfully enough in the classroom the force of positive expectations.

1. In our study we defined positive expectations as a caring, student-centered quality, the willingness to undertake what is necessary for success, and we discovered a high correlation between caring and our three-part indicator of success--retention, learning, and motivation.
2. Let me suggest several ways that teachers can show such positive expectations.
   * Know students by name.
   I know this sounds so simple that it is almost trite, but learning students' names is a signpost, an unmistakable indication that a teacher wants to "know" a unique individual.
   * Attend to each student.
   It is easy to focus attention on a select few in the classroom, to single out the bright, the responsive members of one sex or the other, of one ethnic or interest group or another. Perhaps it is almost reflex to attend to those whose behavior or background you find it easy to understand, but attentive

caring is demonstrated by direct involvement. Students sense immediately when they are being overlooked, and it's an invitation to become lazy and to lose interest.

* Share yourself with students.
  Students quickly know how accessible teachers are. Several programs I know of now that are highly successful in meeting students needs (with better than 90% retention) succeed because their teachers become proactive in making themselves available. Instead of simply maintaining office hours, they make appointments; instead of permitting students to call them, they call absent students; instead of welcoming students to share concerns, they stay after class to talk, or visit the student center frequently, or invite students to their homes. In the process of such give and take, they share of themselves, of who they are beneath the professional guise.
* Monitor Student achievement.
  Teachers need to survey student performance on a daily basis. Students need reinforcement, and teachers need to know when student confusion occurs. Being able to assist students at their precise moments of confusion is the best remedy for their problems. Such frequent monitoring provides opportunity for continual reinforcement, for constructive feedback, and for quickly identifying those students who are failure identifiers--who are likely to drop out of your class early.

More and more I am discoving truly creative learning environments in higher education, environments where energy and resources have been committed to insure student success. Whatever their particular characteristics, without exception the working foundation in such successful settings is a pervasive, institution-wide expectation that students will succeed.

John E. Roueche
Professor University of Texas at Austin
Director, National Institute for Staff and Organizational Development

For further information

Roueche, John E. "Creating an Environment for Learning", Community and Junior College Journal, Vol. 46, #6, March, 1976, pp. 48-50.



**Karen Watkins, Editor**

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# Innovation Abstracts

National Institute for Staff and Organizational Development
North American Consortium

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## A FUTURISTIC LOOK: EDUCATION IN 1985

By 1985 I suspect that youth-oriented trends which developed in higher education in the 1970s will have stabilized. I anticipate that changes surfacing in the last several years will undergird provocative, perhaps disconcerting shifts in our educational processes. Although there will be fewer students in colleges and universities, more American adults will be learning than ever before.

First, considering demographic trends already in evidence, we are experiencing (1) heavy declines in white births, almost none in minorities; (2) as a corollary to a declining birthrate, a decline in the number of young people; (3) a decline in the number of adults who have children in public schools; (4) but an increasing number of working women with schoolage children. Then projecting into the future we might anticipate (1) a drop in unemployment since so many currently unemployed are; (2) a drop in the crime rate since most crimes are committed by unemployed youth; (3) a rapidly aging society, the majority of opinion-making, power-wielding Americans becoming middle-aged, a phenomenon I call "the Balding of America"; and (4) perhaps most disturbing, a growing contingent of unmotivated minority youth. Their birth rate having continued at previous growth levels, this sub-group will experience frustrations associated with having less access to power and opportunity for upward mobility than their parents.

It will be no surprise if I indicate that our nation's--and by extension higher education's--inhibitors will continue to be inflation and government controls. But what may surprise you is the direction in which these constraints will move us.

(1) The middle class will base its value system less on economic gain and saving money, since inflationary money will not be worth more in the future (Americans now save less than people in England, West Germany, France and Japan, using savings as percent of GNP).
(2) Because economic advancement will have less meaning, personal fulfillment will occupy people more than economic gain. (Remember that inflation rewards borrowers and punishes savers).
(3) There will be no independent action we can take to curb inflation, since it is a global process.
(4) Government's need to coordinate its large fiscal commitment to education will increase, and that authority will increasingly reside with state government.
(5) Resources provided by these controlling government agencies will continue to be limited. Accountability demands will result in state and national standardized tests, but not secret-item, multiple choice varieties.

More institutions of higher education, even large state universities, will chafe under the restraints imposed by state formula funding patterns which, for example, will not adequately provide the administrative overhead generated by the part-time student. Colleges--especially liberal arts institutions--will have learned new marketing and recruiting skills to accommodate demographic shifts. Industries will have full tilt into education, choosing to train and certify their own employees, over 400 choosing for all practical purposes to form their own "universities."

Those best capable of coping with the demands of 1985 will be those who have been responsive to demands for clarity of outcomes, specialization and diversification. I anticipate that

(1) higher education will be a much more segmented market. Few will "take" their education in one, two or four year blocks.
(2) remote study units made accessible by technological advances will make it not uncommon to find college graduates who have spent little time on a campus. Companies will make a great deal of money teaching adults in new ways ("Learn Chess from Boris, the Electronic Master").
(3) minimum competency standards will be required for a number of college degrees, particularly in public four-year colleges.
(4) systematic assessment procedures, oftentimes pioneered by the military and industry, will begin to be coordinated with higher education.
(5) certification of skills will become the most viable educational "coin of the realm" with credentials transferring easily from education to the work place and back again. Indeed, the work place will be the college for many.
(6) faculty will include distinguished practitioners who share expertise for short periods and a large group of part-timers (at least 50% of teachers in higher education). But "faculty" will also have to include the one million teachers who teach adults in non-college settings.

Perhaps the central theme for success in higher education during the next decade will be accountability and accessibility. To keep pace, to increase accessibility especially for the adult learner, educators--some 10 to 20 million--will have formed coalitions to use their various kinds of expertise, drawing from their work in colleges and universities, businesses, the media, industry, government, and the military. Such coalitions will provide access to jobs and improve the quality of life for adults in this country to such an extent that continued cost increases will be more willingly assumed by the public. Education will take place in airports, hospital waiting rooms, factories, in private residences--in any of a number of places where students can literally complete educational programs as long as there is a telephone or an electrical outlet. Both teaching and learning will take many forms.

The times will be exciting for those of us in colleges and universities who are prepared!

Harold L. Hodgkinson, President
National Training Laboratories

For further information see
"Education in 1985: A Future History", Educational Record, Vol 6, No. 2, Spring, 1979.



**Karen Watkins, Editor**

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# Innovation Abstracts

National Institute for Staff and Organizational Development
North American Consortium

Vol. I, no. 5

## FOUR CRITICAL MINUTES

Have you ever been a student in a classroom with a new teacher who came in with such a lack of confidence that you soon felt restive? Have you ever been in a conference and caught yourself looking at your watch realizing almost immediately your attention was wandering? In their book entitled Contact: The First Four Minutes, Dr. Leonard Zunin and Natalie Zunin make a convincing case for our becoming far more aware of, in control of, and sensitive to the first four minutes of any new encounter with people. Whether working with individuals or groups, the ramifications of these first minutes are seemingly endless. A teacher may possibly retain or lose students during the first four minutes of a class. If a counselor or tutor does not get past this initial threshold, the potential of direct encounter may be lost. The Zunins' research shows that four minutes is the average time during which strangers in a social situation interact before they decide to part (actually or at least mentally) or continue their encounter. The four-minute concept applies to both casual meetings and ongoing contacts--whenever the contact goal involves communication. In essence, getting through the four-minute barrier is like breaking the sound barrier. After the initial turbulence, we may anticipate smoother progress.

An awareness of four elements will increase the positive effects of these first four minutes. First, it is important to convey a certain degree of self-confidence. This means being neither self-demeaning or overly apologetic nor egocentric, but striking a confident balance. Second, the authors stress creativity, by which they mean finding appropriate ways to tune in to the feelings of others. Caring is demonstrated by listening intently, giving total attention--at least during the first four minutes. The last element, consideration, is being sensitive and aware that you are relating to other persons who are unique and who have fears, insecurities, hopes, and dreams.

When these elements are incorporated into exchanges in instructional settings, indicative behaviors initiated with students may be: (1) helping clarify or modify ideas as they are expressed, (2) responding with meaningful questions and comments, (3) using appropriate eye-contact, (4) injecting humor, and (5) smiling. When you are meeting with a group (a class, team, department, etc.), it is important that you distinguish between tuning in and initiating. Tuning in means asking questions--but tactfully, not like an inquisitor. Initiating means expressing your point of view, explaining how apt you may be at completing a particular job or describing some aspect of yourself in a positive way. In one-to-one encounters with students, there are easy-to-remember phrases that are particularly helpful if used during the first four minutes. For example, such expressions as, "May I get you a chair" or "Would you like to move closer so that you can see the paper?" tend to break down physical barriers. "Can you tell me?" openings such as "Can you tell me how you felt about doing this assignment?" or "Can you tell me something about yourself?" demonstrate your personal involvement during the first four minutes. Verbalizing nonverbal behaviors--saying something like "You are sitting there so quietly," or "Is there anything you would like to talk about?" shows that you are interested and often is a key in making contact.

To further improve your initial contacts, whether with individuals or groups, here are eight steps you might practice:

1. Observe contact between others. How would you react to each person's behavior? You can use the four elements discussed previously like a checklist in your mind. How would you rate this encounter on each dimension?
2. Pay attention to those who seem to make contact ineptly. Invent strategies that would improve their styles. Consider for a minute your initial impressions of problem students. Do they convey these four qualities? For many high-risk students, managing the first four minutes can be quite difficult. Feeling insecure and out of place in the teacher's world, they are anxiously trying to sense whether the teacher regards them as negatively as they regard themselves. Creating a positive first impression with these feelings requires real skill! Perhaps, by modeling positive behavior in the first four minutes and even teaching students these strategies, teachers can give students an important tool to counter negative first impressions.
3. Analyze your personal style as an initiator. Adjectives which come to mind range from tentative to affirmative to aggressive. Examining where you are on that continuum and where you'd like to be can help you determine whether or not to amend your initiating style.
4. Practice ways of making contact which are new to you. For example, many people find initiating conversation in an elevator, at a bus stop, in a line, and in other situations where contact is unusual, a good place to practice new ways of reaching out to people.
5. Change your nonverbal methods of communicating when appropriate. Look more directly at people or stand closer to them, for example.
6. Experiment with people you know well.
7. Regularly go out of your way to make new contacts. In teaching, you have frequent opportunity to practice making a first impression. Analyze your usual style of introducing a course on the first day. Can you recall classes that did not go well at all and contrast your opening gambit with that used in classes that have gone very well?
8. Begin improving initial contacts by developing and acting on a game plan that you designed yourself. What, specifically, would you like to improve in your handling of these first four minutes? How will you go about making this change?

In summary, whether in one-to-one or group situations, educators need to be able to recognize the importance of the initial few minutes spent with students, analyze the effectiveness of their personal initiating styles, and try out varying approaches.

Alberta Goodman
Associate Director for Field Operations
NISOD

For further information

Zunin, Leonard, M.D. with Zunin, Natalie, "Contact: The First Four Minutes", Los Angeles: Nash Publishing, 1972. pp. 7-73, 157-187, 201-221.



**Karen Watkins, Editor**

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# Innovation Abstracts

National Institute for Staff and Organizational Development
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Vol. I, no. 6


## CREATIVE USE OF SILENCE IN THE CLASSROOM

An innovative use of silence in a classroom or small group discussion can significantly affect the quality of instruction. Seven years of research, including analysis of over 900 classroom tapes, documents the value of lengthening the silence or "wait time" between a teacher's question and a student's response.

Normally, when a teacher asks a question, the average wait time she allows is one second. That means that a student must respond within that second or the teacher will jump in again and repeat, rephrase, or ask a different question. If a student does respond, the teacher then waits only 0.9 seconds before either reacting or asking a second question. The research suggests that in neither case is the wait time long enough to permit creative response.

It seems that when a student is asked a question, she must first understand what is asked, make a commitment to participate in finding the answer, and then prepare a response. If the teacher interrupts the sequence before a response is prepared, the student is frustrated and may soon become conditioned, even programmed, not to respond. If she does answer, the student tends to think in bursts, often with several second pauses between bursts. The teacher who jumps in too quickly never allows this natural thought-response process to grow.

Researchers have been able to show that this single innovation-the increased use of wait time--produces a whole cluster of positive behaviors in both instructors and students. When a teacher learns to increase the pause 3 to 5 seconds in the two types of exchanges discussed, these ten positive student behaviors result:

1. The average length of response increases;
2. The number of appropriate but unsolicited responses increases;
3. Failures to respond decrease;
4. Confidence increases (this behavior is measured by the voice inflection pattern);
5. Exchanges and reactions between students increase;
6. Speculative responses increase;
7. Student questions increase;
8. Responses of students designated as slow increase;
9. The variety of responses increases;
10. Inference patterns increase in student comments.

Teacher behaviors change in significant ways as well. Usually, when questions are asked rapid fire by the teacher, a certain discontinuity develops. Discourse is not carefully focused or sequenced and questions do not match responses. But when wait time increases, there are significantly fewer mismatches between student statements and teacher responses or reactions. Obviously, he asks fewer questions because student responses are growing, but a most interesting finding shows that there is much greater distribution in the kinds of questions a teacher asks. With short, one second wait time, most of the questions are informational, but with a three to five second pause, a balanced distribution among informational, leading, and probing questions

occurs. Finally, teachers seem to change their expectations of students they have categorized as slow. Evidence suggests that before incorporating the longer, more uniform wait times into their questioning, teachers inadvertently give good students more time to respond than poor ones. But this innovation encourages instructors to wait for poor students and often to reassess their abilities.

Should you be willing to incorporate longer wait time in classroom discussions, here are points to remember.

1. Wait time after a response is as important as before. A ripple effect in second and third exchanges will occur if wait time is increased.
2. It is not necessary to comment between each response. It may be best if the discussion does not always return to the teacher.
3. It is easy to call on quick responders in class. Proper use of wait time should make it easier to call on students who might never be quick volunteers.
4. It is not advisable to wait out a student. The research suggests that a wait of over 7 seconds does not produce more or better responses.

Here are suggestions for use of the innovation:

1. Without relying on a watch, find an easy mental way to mark off the 3 to 5 second pause. Practice until the length of pause seems reflexive to you.
2. Take time to structure your questions carefully as you begin to use the technique.
3. Practice using wait time in small groups or conference sessions when your efforts can be more concentrated.
4. Practice the technique with other teachers. Ask a colleague to observe a class or two as you begin to use wait time and give you immediate feedback.

Dr. Nancy Armes
Associate Director for Information, NISOD
University of Texas at Austin

For further information see

Rowe, Mary Budd, "Wait time and rewards as instructional variables: Their influence on language, logic, and fate control". Journal of Research in Science Teaching, Vol. 11, #2, 1974, pp. 81-94.



**Karen Watkins, Editor**

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# Innovation Abstracts

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## STUDY UNLIMITED

Modeled on a program of the same name in Chicago, "Study Unlimited" is a cooperative program of Black Hawk College, Moline, Illinois; the River Bend Library System, Coal Valley, Illinois; and six of its affiliated public libraries. In this program which began in June, 1975, college-credit courses, preparation for the GED examination, and assistance in preparing for CLEP are made available in public libraries located in Rock Island, Moline, Silvis, Mineral, Erie, and Orion, Illinois. College-credit courses in the program are also offered in the independent learning center on campus.

"Study Unlimited" courses are prepared on videocassette or audiocassette, in multimedia, or in printed form. Students can use these materials on audiovisual equipment, including videocassette players and monitors located in, purchased, and maintained by the participating public libraries. Included as part of the program are "Tak-Hom-A-Kourse Kits," printed materials including programmed texts and all of the "Courses by Newspaper" series.

At present approximately 40 courses, almost all of the college's parallel or transfer programs, are available through "Study Unlimited." Most of the videocassette and audiocassette courses have been prepared by Black Hawk College faculty, and all courses are taught by regular, full-time college faculty. Many of the courses use the same examinations and some of the same textbooks required in parallel campus-based courses, and all have the same objectives and content. All courses are variable-entry and self-paced; a student can enroll in a course on any day and then take up to twenty weeks to complete it, with a "stop-out" option available in case of vacation or emergency.

Students enrolled in "Study Unlimited" courses attend discussions sessions either on campus or in public libraries where faculty are available at regular hours for conferences or telephone calls and questions. In fact, students in the program never need to come to campus but can enroll in courses, order texts, complete all instruction, and take examinations at participating public libraries. Academic advisement services are also available at these same libraries.

### PRACTICAL IMPLICATIONS

"Study Unlimited" is one of the fastest-growing parts of Black Hawk College. In its first year, enrollment totaled 850 semester hours; in its second, 1650 hours; in its third, 2850; and in its fourth, 3250. With the exception of one speech course, a student can now complete an A.A. degree entirely in the program. At present, approximately 15 percent of the college's full-time faculty are involved in the program on a part-time basis as a part of their regular teaching assignments.

A demographic study of students enrolled in the program suggests that it serves new student populations in the college's community as

well as traditional students. More than 82 percent of those enrolled are part-time students; over 65 percent are employed; over 61 percent are married; over 60 percent are 25 or older; and over 46 percent have never before enrolled at Black Hawk College.

Black Hawk College initiated and has continued to expand its "Study Unlimited" program with no outside assistance or grant funds other than the support received from its local library system and participating public libraries. An innovative faculty with good audio-visual support services can begin a similar program. Annual unit cost studies show that "Study Unlimited" student hours are not significantly more expensive than those taught in traditional classrooms on campus, and, in some cases, because of more efficient use of instructional services, they are even less expensive.

Because Black Hawk College serves a population of approximately 250,000 in a college district of 2200 square miles with much of its district rural in setting, "Study Unlimited" extends college courses and services inexpensively to students who are geographically far removed from campus. One public library participating in the program is located 45 miles from campus in a town with a population of 300.

The acceptance of the "Study Unlimited" program by traditional college faculty and their support of it suggest that Black Hawk College exercised good foresight in developing the program using its traditional fulltime faculty. Its growth became one way to make cutbacks in faculty unnecessary because of declining enrollment, especially in university parallel program faculty. There has been little faculty resistance to or suspicion of the program, and students enrolled have been well served.

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Division Director of Developing Programs

For further information

Stevens, Mary A. "The Community College Grows Up and Out," New Directions for Community Colleges, XXIV (1978), pp. 33-39.



**Karen Watkins, Editor**

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# Innovation Abstracts

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## ASSESSING GENERAL EDUCATION COMPETENCIES

The American College Testing Program (ACT) organized the College Outcome Measures Project (COMP) in 1976, as a response to the growing need for innovative ways of assessing student competence. ACT's goal was to design, develop, validate, and implement assessment instruments and procedures to measure and evaluate certain kinds of competencies that undergraduates are expected to acquire as a result of general education--the competencies that are believed necessary for successful functioning in adult society. COMP focuses on six such competencies: Communicating, Solving Problems, Clarifying Values, Functioning with Social Institutions, Using Science and Technology, and Using the Arts.

To date, seventy institutions have helped field test COMP's three assessment instruments--the Composite Examination, the Objective Test, and the Activity Inventory. These instruments have undergone considerable refinement, a process that will continue during 1979-80. As part of that process, the instruments will be made available to additional institutions that request them for experimental use in evaluating student competence. As in the past, ACT will provide instruments, adapt and supplement them for local use, evaluate student responses, and consider appropriate ways of applying the results to institutional policy and curricula.

The first major step in COMP was to have the initial participants prepare and distribute a list of the general education competency expectations commonly held by institutions and agencies. This list was the result of a consensus process involving the initial representatives from community colleges and universities. Participants in the program believe that this list contains many, though not all, of the competencies that should result from general education and that appear to be necessary for successful adult functioning. Much COMP research centers around empirical examination of the six major competencies:

Communicating: Can send and receive information in a variety of modes (written, graphic, oral, numeric, and symbolic), within a variety of settings (one-to-one, in small and large groups), and for a variety of purposes (for example, to inform, to understand, to persuade, and to analyze.)

Solving Problems: Can analyze a variety of problems (for example, scientific, social, personal); select or create solutions to problems, and implement solutions.

Clarifying Values: Can identify one's personal values and the personal values of other individuals; understand how personal values develop; and analyze the implications of decisions made on the basis of personally held values.

Functioning with Social Institutions. Can identify those activities and institutions which constitute the social aspects of a culture (for example, governmental and economic systems, religion, marital and familial institutions, employment, and

civic volunteer and recreational organizations); understand the impact that social institutions have on individuals in a culture; and analyze one's own and others' personal functioning within social institutions.

Using Science and Technology: Can identify those activities and products which constitute the scientific/technological aspects of a culture (for example, transportation, housing, energy, processed food, clothing, health maintenance, entertainment and recreation, mood-altering, national defense, communication, and data processing); understand the impact of such activities and products on the individuals and the physical environment in a culture; and analyze the uses of technological products in culture and one's personal use of such products.

Using the Arts: Can identify those activities and products which constitute the artistic aspects of a culture (for example, graphic art, music, drama, literature, dance, sculpture, film, architecture); understand the impact that art, in its various forms, has on individuals in a culture; and analyze uses of works of art within a culture and one's personal use of art.

The initial planning, design, and field research tryouts of preliminary COMP assessment materials suggested that three different approaches should be developed to assess the six competencies. The three approaches that resulted were the Composite Examination, the Objective Test, and the Activity Inventory. Field testing yielded useful preliminary information about the validity, reliability, and cost-effectiveness of these approaches for measuring each of the six competencies.

The Composite Examination is a series of fifteen simulation activities based on realistic stimulus materials drawn from the adult public domain. These simulation activities require application of general knowledge and skills to problems and issues commonly confronted by adults. In the Composite Examination, students consider the materials and then respond with short, written answers, with some longer expository passages (a task made more realistic to students by asking them to write "letters" rather than "essays"), with some oral responses which are audiotaped, and through innovative multiple-choice questions. Most student responses are judged by faculty using standardized rating scales. The Examination is modularized to allow institutions to administer any or all parts of it, according to their needs. All questions on the Objective Test, however, are posed in a unique multiple-choice format. Responses are recorded on machine-scorable answer sheets. The Objective Test is the result of an effort to create proxy measures for the Composite Examination. The Activity Inventory uses a multiple-choice, self-report format to assess the quality and quantity of student participation in out-of-class activities related to the six competencies.

Dr. Aubrey Forrest, Project Director

For further information,
samples of COMP assessment instruments, or to be placed on COMP's mailing list for periodic information about the project, please write to: COMP, The American College Testing Program, P. O. Box 168, Iowa City, IA 52243. Or telephone Dr. Aubrey Forrest at 319/356-3933.



**Karen Watkins, Editor**

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# Innovation Abstracts

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North American Consortium

Vol. I, no. 9


## TOWARD A NEW DEFINITION OF LITERACY

The National Institute of Education has funded the Program in Community College Education at The University of Texas at Austin to investigate literacy acquisition by the culturally different student within the community college setting. In effect, NIE is underwriting attempts to: (1) formulate a working definition of literacy, (2) investigate the state of the art of literacy acquisition in the community college setting, specifically as it relates to culturally different students, and (3) develop a theory and method of literacy acquisition that can be generalized to provide usable information for developing workable programs for the improvement of developmental courses. The first and third NIE-sponsored tasks are addressed in this abstract.

### PAST DEFINITIONS

It is almost amusing to note that after several thousand years of written language, the debate over a definition of literacy still rages. Our literature search suggests that literacy will probably remain an elusive concept; and at best, operational definitions will be formulated within special fields of interest and within each different sociocultural context. Definitions of illiteracy and literacy range from a focus on basic reading, such as the official UNESCO definition of a literate person composed in 1962: a literate person is "a person who can both read and write a short, simple statement on his everyday life"...the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community..." Similarly, the Northcutt study, conducted at The University of Texas (1975), defined literacy as "the ability to use skills and knowledge with the functional competency needed for meeting the requirements of adult living."

### AN EMERGING DEFINITION

Our literature search has provided us with bases for tentative agreement that the goal of literacy must be to help people live fuller lives, that literacy improves one's chances for survival in our post-industrial society, and that it enhances life's meaning (in that literate people as opposed to preliterates appear to have more options for experiencing fully conscious living in action and reflection). Without this ability, individuals are content to exist in the world rather than participate in it.

Literacy, then, permits the expansion of self, of experience, of consciousness, and of social context. It, in short, allows the expansion of individual scale and personal scope; it enlarges one's view of time and space. Literates are provided opportunities for defining the relationship between themselves and the world.

For literacy does not include simply the skills of reading, writing, and computing; it includes abilities for changing the way a person thinks and acts. We have discovered that preliterates think in concrete images and seldom, if ever, generalize beyond their own personal experience. Thus, they are severely limited in their concept of scale. They have difficulty envisioning or conceptualizing existence outside of what they know and what they have experienced.

### AN INTERESTING THEORY AND METHOD

In formulating a working definition of literacy and some interesting theories and methods of literacy development, we have investigated the biological dimension of the

literacy question. Several researchers have speculated that some individuals are more right hemisphere preferenced in their thinking, others more left; that social and cultural factors influence both cognitive processing and learning strategies; and that class and ethnic differences might be better understood in light of this theory. In our literature search, we discovered findings in the neurosciences that suggest a hemispheric specialization theory--that the two cerebral hemispheres specialize in different functions in most people-that may be useful for investigating differences in cognitive processing of adult learners. Experiments indicate that the left hemisphere seeks out details rather than perceiving wholes. The right hemisphere, on the other hand, is holistic and pattern-perceiving. Linkages between the biological processing of information and instructional strategies in literacy acquisition programs are particularly exciting!

## IMPLICATIONS FOR EDUCATION

(1) We must question what the literacy demands are on a fully functioning person and design programs to meet them. In effect, we must be about investigating the realities of literacy demands; for example, we should determine with instructors, employers and/or potential employers, what the absolute educational/job skills are to participate successfully in that environment. Moving beyond these inquiries, we must observe/interview individuals who are currently involved in educational/vocational experiences to discover "reality-based" skill demands.

(2) We must provide literacy skills that move beyond an individual's merely being able to read instructions for doing a job or for learning how to do a job. Literacy must enable individuals to move beyond their immediate experiences and enlarge their scope (or scale). Instructional strategies that plant seeds of encouragement and enthusiasm for continuing to expand educational/vocational horizons are desirable. Students whose initial experiences in literacy development efforts are particularly successful, are of interest and value to them, and have obvious pay-off, tend to return for other educational experiences that will enlarge their view of the world.

(3) From the point of view of curriculum and instruction, aesthetics (or right brain) interventions for fostering basic skills development are needed. Using art, music, drama, aesthetic approaches--e.g., field trips, creation of "products", increased use of media, utilizing high-imagery words, hands-on activities--to teaching reading and writing have been remarkably successful with low achievers (particularly in the area of reading). It is possible that the aesthetic response resides in the right hemisphere and that the right brain stimulation--e.g. multisensory approaches--may be partially responsible for motivating students.

(4) Traditionally, the ability to seek out details, to be analytical is rewarded. It appears important that individuals be holistically educated, that both hemispheres be "schooled"--e.g., detailing and abstracting skills be taught to pattern perceivers and skills in perceiving patterns be taught to students whose focus has become more limited.

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**Karen Watkins, Editor**

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# Innovation Abstracts

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## STANDARD ERROR OF A TEST SCORE

This abstract offers a practical way to apply some useful ideas about testing and measurement in as painless a manner as possible. My intent is to demonstrate that non-mathematical teachers who are regularly involved with grading can use an idea based on statistics to improve their ability to be reliable graders. It has been my experience that those of us who teach are continually concerned with this issue. There are currently two ways to grade students: (1) the growth method in which the grade represents how well the student has grown in the time he or she has been with you; and (2) the standards method in which the teacher measures the student against a set of goals, objectives, standards, or competencies which have been selected for that course. This second method uses objective test measures and is where the concept of standard error could be of use to teachers.

Let's first explain what we mean by the standard error of a test score. Because every measurement has some unreliability, you can never be certain that one particular administration of a test, for instance, yields the "true" value or score for that individual. If it's not possible to know the "true" value or score, it's at least desirable to know how far off we might be. This is possible by the use of the standard error of measurement. Although the standard error (S.E.) is based on a formula computation, the table below gives enough information to meet most teachers' needs if they are grading a ten or more item test.

Now think of two students who are taking an objective, multiple choice test which has 30 graded items. Ann gets 21 of them right and Betty gets 20. Certainly, Ann got a higher score than Betty, but did she deserve a higher grade? In fact, when can you be reasonably certain that two different scores justify two different grades?

A test with 30 items has an S.E. of 3. This means that the next time Ann or Betty takes that test, Ann or Betty could score 3 points higher or lower; the next time around, Betty may be the "high" student, but we can be sure that there is a significant difference between Ann and Betty when the difference between their scores is at least 2½ times the standard error of the test score. We need a seven point spread to justify A for one and B for the other (if we want to be at least 68% certain of a real difference). The next time you grade a set of test scores, take a look at this table.

| Total number of items on your test | 10-23 | 24-47 | 48-89 | 90-109 | 110-129 | 130-150 |
|---|---|---|---|---|---|---|
| Scores must differ by this much to justify a different grade | 5 | 7 | 10 | 12 | 15 | 17 |
| S.E. of Test Score | 2 | 3 | 4 | 5 | 6 | 7 |

Using Ann and Betty's test as a further example: If the teacher decided that 15 correct answers was the midpoint of the C grades, then 7 points up and down from that midpoint of the A's would be 29 and the midpoint of the F's would be 2. This kind of grading system might not please you, but it would be a systematic way to grade objective tests. Since there is no such thing as a perfect test, one thing we can do is to apply all the techniques available to us that will let us at least be as fair as possible. Here are some simple ways to make our tests into better measuring instruments:

1. Make tests longer. The longer a test is, all things considered, the more reliable it is. This doesn't mean the test has to be 50 items long; 2 short tests can do as well--depending on your time and resources.

2. Make test items of the same relative difficulty. We may tend to start off a test with easy items and then make them more difficult because we want a wider range of scores, but, since about 1932, it's been generally known that this doesn't give you a wider range of scores at all. The best way to do that is to create test items that 60-70% of the students get right. In practical terms, this means no "giveaway" test questions and no "tricky" ones either. The important thing is the proportion of the total that students get right anyway.

3. Make up multiple-choice items with 3 choices instead of 4 or 5. I tried out this system, and it seems to work well. The advantages are that I can test more knowledge in the same time and paper space; I also find it much more difficult to come up with five choices that will "draw blood" than I do with three.

4. Diederich suggests that you can also determine the discriminating power of each item through a show of hands. With each item, simply ask students to raise their hands if they got the item right. Record the results. You may find an item that negatively discriminates--i.e., none of the better students got it right!

FINAL NOTE: I have greatly simplified the statistics in this article since I am not a "professor of statistical thinking." For those who would like additional supportive data, I urge you to refer to the sources from which this information was "researched."

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Miami-Dade Community College, North Campus

For further information see

Short-Cut Statistics for Teacher-made Tests, Paul B. Diederich. ETS #5.

"Tests of the Same Lengtn Do Have the Same Standard Error of Measurement," Frederic M. Lord. Educational and Psychological Measurement; XIX, 2 (Summer, 1959) 232-239.

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Karen Watkins, Editor

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# Innovation Abstracts

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## STRATEGIES FOR INSTITUTIONAL CHANGE

As I view what has occurred in higher education in the past decade, I conceptualize disjointed and uncoordinated efforts to change people, organizations, and curricula. In my own experience in working with many community colleges, I view my efforts along with other architects of change as successively placing fingers into holes in the dike--totally oblivious of the fact that the dike when viewed objectively is not a dike at all but a colander. In extending this analogy, we discover that the fingers are limited, and the holes are endless.

In 1972, I developed a goal-setting process that I initially labeled "participative structuring." In essence it was an attempt to build a more solid institutional structure not subject to leaks. This process grew out of an intense personal belief in participative decision-making. My notion was that people will buy into institutional goals when they can participate in the decision processes that affect the individual, the organization, and the curriculum. The strategy was to organize a workshop that involved the participation of a representative sample from the entire community. Ideally, the school board, faculty members, administrators, and representatives from the student body and the citizens of the community would participate.

The participative goal-setting process that evolved takes place in a workshop setting and lasts about five hours. Participants rank goals in three stages. The first "Individual Sort" is a chance for each participant to establish goal priorities. This is followed by a "Group Sort" in which heterogeneous teams of four (student or parent, teacher, administrator, and citizen) reach group consensus by rank ordering goals. The negotiations necessary to achieve consensus require open communication among these persons who have differing orientations about the purposes of the institution. In essence the five-hour activity is what I call an elbow-grease process with an interesting mix of people gathering for the workshop, each individual working to prioritize goals, and then struggling again to find compromises that will make group consensus possible. Watching it all mold into a clearer perspective of what the institution's goals ought to be is an exciting process.

The participative goal-setting process was subsequently conducted in scores of community colleges across the country. Participants reported positive feelings about the process (99%). Essentially, all groups involved in the process were able to agree, within limits, on institutional priorities reflecting institutional mission, curriculum outcomes, and administrative norms (99%). Most of the participants in the workshop reported that the goal-setting experience was the first time ever in their association with the college that they had been asked to participate in decision-making (86%). College officials reported that their purpose in employing the process to gain consensus about goals was to identify values to help with the long-range planning process of the institution. But in follow-up studies with colleges who had employed the participative process, I discovered that the process had, in fact, not often been used for long-range planning. In general, the results of the goal-setting process, achieved in four or five hours of serious discussion, negotiation, compromise, and final consensus, were filed away as another finger in the "colander dike."

Then in the fall of 1978, I added an additional element in one more effort to build a leakproof structure. In conducting the goal-setting process at Spartanburg Technical College in Spartanburg, South Carolina, I informed the college officials there that I had discovered few lasting effects of the goal-setting process and asked them to answer the question, "How can we ensure that this goal-setting process will become part of an overall strategy to change the college in some positive manner?" In brainstorming about the problem, we concluded that a need for institutional goals must somehow be converted to institutional competencies expressed in terms of student behavior before we could expect changes in individuals in the college, changes in the institution, and, most importantly, changes in the college curriculum.

The method selected was a two-part process. Within the institution, a task force was formed, and a modified "Delphi Technique" was used to obtain a list of competency statements that were based in part on the goal-setting workshop outcomes. A checklist was developed and field tested that listed twenty abilities or attitudes which might be possessed by new employees. This checklist was distributed to local business and industrial personnel officers who indicated the relative value of each of these attributes. The results, gathered from the college and from industrial representatives as being important for new employees, were then compared.

The result was a consolidated list of student outcomes such as these was compiled:

The student will be able to

1. Read, speak, listen, and write effectively.
2. Understand the importance of building good relationships with supervisors, co-workers, family, and others.
3. Have a positive self-image as a competent, capable worker and worthy individual.
4. Perform the mathematical computations required in the job environment and in normal life situations.

I'm particularly glad we carried the entire change process through this second stage. I have every reason to believe that the college will follow through in redesigning curriculum to include these generic student competencies. Together we may have finally discovered a comprehensive institutional process for bringing positive change that avoids the pitfalls of plugging corks into a leaky dike.

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# Innovation Abstracts

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## THE EVOLVED OAKTON LEARNING CLUSTER

### Cluster Premises

Some of the premises on which the determination to establish Oakton Community College as a cluster college, rather than a departmental college or a divisional college were the following:

Faculty members who are learning and who are excited about learning are likely to be good teachers.

Faculty members are likely to learn more and to be more stimulated by other faculty unlike themselves in specialization and background than from their exact subject-matter peers (competitors).

Faculty members who need to compare notes with fellow specialists will find a way to do so, whether the administrative structure facilitates or demands that consultation or not.

Most of the "business" of academic departments is self-serving Mickey Mouse.

There were other premises, of course, but those four give a fair idea of the frame of mind that preceded Oakton's organization.

The cluster concept was implemented in 1970-71. It has evolved in the intervening years, and has become in its way a local tradition, but the innovation is alive and it provides in my view, but also in that of deans and many faculty, a sound structural basis for a number of current and future innovations in teaching.

Oakton--which is a public community college serving the district from O'Hare field to Evanston, from Chicago to Lake County, growing from twenty-odd faculty members to more than five times that number, and from fewer than nine hundred students to more than nine thousand students in its nine and a half years of operation--started with three clusters. It now has five clusters. Let me tell you what they are and what they permit and encourage the faculty to do.

### Cluster Organization

Each cluster consists of roughly one fifth of the faculty, full-time and part-time, including student development faculty (the topic for another abstract, to be understood here as "counselors plus" with emphasis on the plus). Baccalaureate transfer faculty are assigned, partly on the basis of their own personal preference, one by one, to the clusters. Other things being equal, the first mathematics faculty member is assigned to Cluster One, the second to Cluster Two, the nth to Cluster N. If each discipline had five faculty members, distribution of discipline members would be equal, at least in theory. Occupational faculty are assigned, program by program, to the clusters. Other things being equal, the first health-related program is assigned to the first cluster, the second to the second, until we run out of programs, clusters, or both. There is no one cluster that specializes in mathematics. There is no one cluster that specializes in an occupational category.

Faculty are housed in their clusters. When Oakton occupies its permanent campus, that will be more evident that it is in today's interim housing. A cluster is administered by a dean. It includes students, but the allegiance of students to a cluster is minimal. We no longer apologize for this fact, but simply concede that it comes with the territory.

Cluster Benefits

The clusters permit classroom and lab/shop/studio faculty to work closely and cooperatively with each other and with counseling-teaching faculty (student development professionals) in planning, teaching, professional development, etc. The college, and the clusters as instruments of college policy, encourage unusual "packaging" of content, for example, in combinations of courses called "tandems," "triads," etc., involving two or more faculty members, two or more scheduled class meeting times, and a mutual illumination of subject matter. Tandems have included the pairing of Introduction to Business with Social Problems, the pairing of Political Science with Communications, the pairing of Psychology of Personal Growth with Physical Fitness, etc. Cluster faculty form natural multi-disciplinary teams. This is a good beginning for many faculty tasks, such as a self-study in preparation for accreditation or reaffirmation.

The absence of departmentalization facilitates individualization in teaching approaches. College policy encourages rather than discourages differentiation of several approaches to teaching the same content. In fact, the college annually publishes a directory, the purpose of which is to help students match their learning style with a specific faculty member's teaching style. While this approach lacks any pretense of "scientific" rigor such as that claimed for cognitive style mapping, it does help faculty and students to take seriously the theoretical and stylistic difference between one form of teaching and another.

Some Concluding Observations

As Oakton ends its final decade, the evolved cluster concept provides a basis for further evolution and innovation in developing students and maintaining a highly motivated faculty-staff-administrative team. It is the cluster which makes Oakton what it is, and gives it a chance to become what it hopes to be.

A final value of having the college organized on a cluster basis, something by no means unique but still not as common as I expected it to be at the end of the seventies, is the need to explain it. Lest I seem perverse, let me restate that. If Oakton were conventionally organized, nobody would ever ask "does it work" or "how does it work." People in the academic world generally think they know how a department works. Most know how a division works. With a cluster--"what kind of a cluster did you say?"--it is necessary to ask. That keeps us on our toes.

And that's the way some of us, at least, want it to be.

William A. Koehnline, Founding President
Oakton Community College

For further information see:
"Cluster College: Oakton Community College" in Managing Academic Change by S. V. Martorana and Eileen Kuhns (Jossey-Bass Publishers, 1975), pp. 33-40.



**Karen Watkins, Editor**

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# Innovation Abstracts

National Institute for Staff and Organizational Development
North American Consortium

Vol. 1, no. 13


## THE CLOZE PROCEDURE: WHAT IS IT AND HOW CAN I USE IT

### Background

The cloze procedure was introduced by Wilson Taylor in 1953. Since that time more than 600 research studies have been reported utilizing this technique as a measure of the readability of written materials, reading comprehension, reading gain, listening comprehension, verbal ability and English as a second language.

Taylor coined the term "cloze" from the gestalt term "clozure." In gestalt psychology the term "clozure" describes the human tendency to complete a familiar but not-quite-finished pattern--to "see" a broken circle as a whole one, for example, by mentally "clozing" up the gaps. He suggested that the same principle would apply to language. For example, given, "Chickens cackle and ____ quack," almost anyone can fill in the word "ducks." A reader or listener is able to guess what the mutilated sentence means as a whole and then complete its pattern to fit that whole meaning. A receiver (reader or listener) can interpret and reconstruct a mutilated message from a sender (writer or speaker). Given the redundancy of language, its structures and substructures and our familiarity with it, it is not surprising that an efficient reader or listener is able to predict many of the oncoming words.

### Definition

Cloze tests offer educators and researchers a number of practical advantages not always inherent in other tests of reading comprehension. Among these advantages are the ease of (1) construction, (2) administration, (3) scoring, and (4) interpretation.

To construct a cloze test of reading comprehension, one simply chooses a passage of material, appropriate in content and length to her/his purpose and the subjects to be tested, deletes words from the passage on a random or every nth basis (see the sample) and replaces them with underlined spaces. Most authorities suggest that no words be deleted from the first and last sentences in the passage to provide more context for the reader. Cloze tests containing approximately fifty items, constructed in this manner, are usually valid and of sufficient length to be reliable. Cloze tests are administered by giving the subjects the mutilated passage and asking them to fill in each blank with the word they believe the author used. Subjects are urged, as they fill in each blank, to make inferences even when they are not entirely sure of the correctness of their word choice. They are usually informed that incorrect spellings will not count against them if the administrator can determine which word the student meant. Cloze tests are easily scored when the exact word method is used. This means that any correct answer must be the exact word which the author used in the unmutilated passage. The percentage of correct words filled in becomes the student's raw score. Interpretation of these scores may be made by comparing the student's percentage score with your own pre-determined levels to establish his/her independent, instructional or frustration level of reading. For example, you may determine in a subject area with a highly technical vocabulary that 90% correct is necessary as a prerequisite for an advanced course. For most subjects, however, 50-60% correct is probably sufficient. You may want to experiment with your subject matter. Studies by Bormuth (1967), Rankin and Culhane (1969), Peterson, et. al. (1972, 1973) and others have found that getting 60% correct on a cloze test is comparable to 90% comprehension as measured by multiple choice tests of reading comprehension.

Practical Advantages and Utility

In addition to being easy to construct, administer, score and interpret, cloze tests are economical and versatile. Since it is not necessary to purchase test booklets and answer sheets when using cloze tests, only the cost of typing and duplicating is incurred. Furthermore, cloze tests can be developed utilizing any type of material or subject matter. This flexibility allows the teacher or researcher to develop and use tests directly related to the content which she/he is interested in measuring. The purpose for testing can also be varied to allow the teacher or investigator to obtain an estimate of students' previous knowledge, experience, or information gained from reading. In addition, both general reading comprehension and specific comprehension of a particular passage can be measured. Rankin (1958) explained that by restricting deletions to either nouns or verbs (i.e. lexical) it is possible to gain information about students' comprehension relative to the specific content (lexical meaning) versus their understanding of patterns of interrelationships among ideas (structural meaning). When used as a pre-test in which subjects fill in the blanks without having previously read the material, cloze scores provide insight into the students' previous knowledge of the subject, language usage, vocabulary and reading skills. When used as a post-test in which subjects fill in the blanks after having read the unmutilated material, cloze tests can also be used to measure reading comprehension. Under certain circumstances, the use of both pre- and post- cloze tests over the same material permits a measure of the information gained from reading. The cloze procedure is a valid and versatile technique with great potential utility for both instructors and researchers. Because students lack familiarity with this measurement technique, it is important to provide some practice prior to administering a cloze test.

A Sample Cloze Test (May be used as a short practice test)

The Beavers

Indians call beavers the "little men of the woods." But they 1 really so very little. 2 beavers grow to be 3 or four feet long 4 weigh from 30 to 5 pounds. These "little men 6 the woods" are busy 7 of the time. That 8 why we sometimes say, " 9 busy as a beaver."

10 know how to build 11 that can hold water. 12 use their two front 13 to do some of 14 work. Cutting down a 15 with their four sharp- 16 teeth is easy. Beavers can cut down a tree four inches thick in about 15 minutes.

The following words were deleted from the above passage: 1) aren't; 2) Most; 3) three; 4) and; 5) 40; 6) of; 7) most; 8) is; 9) as; 10) Beavers; 11) dams; 12) They; 13) paws; 14) their; 15) tree; 16) pointed.

Phoebe Helm, Director, Developmental Studies
Triton College, River Grove, Illinois

For further information see

Bormuth, J., "Comparable Cloze and Multiple-choice Comprehension Test Scores." Journal of Reading, Feb. 1967, pp. 291-299.

Taylor, W., "Cloze Procedure: A New Tool for Measuring Readability." Journalism Quarterly, 1953, Vol. 30. pp. 415-433.



Karen Watkins, Editor

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# Innovation Abstracts

National Institute for Staff and Organizational Development
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Vol. I, no. 14 EDUCATIONAL INDICATORS: TAKING OUR PULSE

At the National Institute for Staff and Organizational Development, we naturally keep our eyes open for indicators of trends in higher education. Certainly the key to effective staff development is to be responsive to the educational environments in which we find ourselves. Included in this abstract are a series of recent statistical indicators of national import. Many of the implications will be self-evident, but it will be a healthy exercise to think about their implications as we undertake strategies for improving the quality of instruction.

1. Minority students make up nearly one-fourth (22.4 percent) of the total enrollment in two-year colleges, with the minority population increasing at a greater rate than the general enrollment during the 1970s. Of the minority students in higher education, 38.8 percent are in two-year colleges. Minority personnel hold 13.9 percent of the administrative, 16.9 percent of the professional, and 11.5 percent of faculty positions in community colleges. AACJC

2. Some 116 million people are involved in some type of organized learning in the United States today. About 64 million are participating in post-secondary education, with only an estimated 18 million enrolled in educational institutions and 46 million learning through other organizations.
Educational Testing Service

3. When two million of last June's high school graduates were polled, 60 percent said they expect circumstances to get worse for the nation, a figure that is 20 percent higher than it was in 1978. In a seemingly contradictory response, nine out of ten in this same group thought their own lives would improve in the next five years. Institute for Social Research

4. Teaching professionals representing all aspects of higher education--research institutions, community colleges, universities--reflected the following views:
96% believed students with whom they dealt were underprepared in basic skills and thought grade inflation was a problem
81% believed a widespread lowering of standards had occurred
72% thought college students were ill-suited for academic life
69% said they were not grading as stringently as they once did
1977 Survey of the American Professoriate

5. Fifty-seven million Americans, about one in five, lack skills to perform basic tasks, such as addressing a letter so that it will reach its destination or interpreting a bus schedule or understanding a printed explanation of finance charges. Three million of those lack "competencies necessary to function in society"; an additional 34 million are able to function but not proficiently. More specific indicators include
More undereducated adults live in urban than in rural areas--62 percent to 38 percent, respectively.

Of the 54.3 million persons 16 and over in 1970 who were not enrolled in school and who had less than a high school education, 75 percent earned less than $5,000 a year.

In the period from 1974 to 1975, 25.3 percent of all drop-outs between the ages of 16 and 24 were unemployed; 61.4 percent of those nonwhites who dropped out of school were unemployed.

For women with five or more years of college, the average gap between their salaries and men's (of equal education) was 35 percent. For women with four years of high school, it was 42 percent and increased as the level of education was lowered.

Ford Foundation Report on Adult Illiteracy in the US

6. The number of college students desiring to enter the teaching profession has dropped 50 percent in the last five years. Gallup Poll, February 1979

7. In 1960, 171,000 women between the ages of 25 and 34 were college students; in 1972 there were 627,000 such women; 1,561,000 women 25 and older were attending colleges and universities by 1975. United States Bureau of Census

8. During 1977-78, a total of 235,509 foreign students attended 2,475 colleges and universities, reflecting an increase of 32,441 students when compared with 1976-77 totals. The number of foreign students attending two-year colleges has increased 2½ times in the last seven years with 15.9 percent of all foreign students now enrolled in two-year institutions.

Institute of International Education

9. The average high school graduate reads at just below the eighth grade reading level, a decline of two grade levels since 1972. Indicators suggest that 20 to 35 percent of these new college students are functionally illiterate (reading below the fourth grade level).

Verbal proficiencies required in trade and technical programs have nearly doubled in the past fifteen years.

Although almost 90 percent of our student growth during the last three years has been female and women represent fully half of the student population, only one in ten administrators in community colleges are women.

The return rate of minority students to community colleges after one year is only one in nine.

The Program in Community College Education at the University of Texas at Austin

From time to time we would like to publish such indicators. May we suggest that you select several of these items that raise important questions for you and for your institution and brainstorm appropriate responses with your colleagues.

John E. Roueche, Director
Nancy R. Armes, Associate Director for Information

For further information

In this instance we would like to ask that further information come from you. If you have access to statistics of general interest to our readers, send a summary of the information to Dr. Nancy Armes, Associate Director for Information, National Institute for Staff and Organizational Development, The University of Texas at Austin, Program in Community College Education, Education Building 348, Austin, Texas 78712.



**Karen Watkins, Editor**

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# Innovation Abstracts

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Vo. I, no. 15 ORGANIZING STAFF DEVELOPMENT PROGRAMS THAT WORK

In 1972, I was commissioned by the President's National Advisory Council on Educational Professions Development to assess the need for staff development in community colleges. I began an interesting, sometimes tenuous journey to discover the basic principles for success in a staff development program. From the beginning I was convinced that improved staff development would lead to improved student development. To reach such a goal, each program should meet both institutional and personal needs of staff. Here, briefly, I want to identify seven common elements for achieving a solid foundation for a staff development program. At the same time, I will suggest ways to adapt such components to an individual campus setting.

I. An ASSESSMENT should be made of administrative views and support, of the present level of staff development activities, of institutional and professional/personal needs, and of resources within and near the institution.

Beginning with the president, administrative support is crucial to success. Strong initial administrative support makes feasible a comprehensive assessment process whereas some reluctance from administration suggests a need to target very specific groups, such as student personnel staff or part-time instructors. In either case, it is important to survey informal staff development activities already in existence. Such surveys often reveal hidden resources, discretionary funds, for example, that can be drawn on in building a formal program. Accomplishing institutional and individual needs assessments is the most important assignment facing the staff developer. The questionnaire and the personal interview are the two most popular methods for such assessment. Personal interviews take time but often build support; questionnaires reach large numbers and bring uniformity to the process. I have found both to be useful in building a program that really works.

II. A statement of PHILOSOPHY for the staff development program should be developed and approved by the members of the institution who are to be served.

Ideally, such a statement should reflect a program organized for all staff, structured as an ongoing 12-month effort that reflects the mission statements of the college. But, in my experience, all of this will not matter if staff ownership is not cultivated through review, input, and discussion from the ranks.

III. ORGANIZATION and STAFFING must be appropriately coordinated to fit the limitations and resources of the institution. The organization must include a competent staff to carry out the coordinating function.

There is no consensus as to the ideal organizational pattern as yet, but it is clear that someone must be in charge if the program is to work. A strong union may push for a faculty committee, or an administrative mandate may mean a coordinator will provide leadership. In either event, an advisory committee, reflective of major contingents, is helpful to a program seeking credibility.

A program run by committee or decentralized into various divisions of the college often lacks focus, especially if release time is not given coordinators. I think the most feasible organization for a staff development program is one coordinated by a full-time staff development person. In higher education circles, we are just beginning to formalize ways to offer expert training to such professionals.

IV. A wide variety of ACTIVITIES must be designed to meet the various needs of all the constituencies represented in the institution.

Using the results of assessment and the mission statement as a focus, comprehensive programs for staff development may include:

A. Curriculum offerings managed much like a student curriculum in which courses are taught for various segments of the staff, with credit sometimes applying to the salary schedule or toward promotion in academic rank.

B. Grants to staff for special projects which positively impact the educational environment.

C. Ways to analyze teaching methods--videotaping, classroom visitation, etc.

D. Team visits to other colleges to review innovative or exemplary programs.

E. Off-campus activities carefully coordinated with follow-up activities to share the new information gained from conferences, retreats, graduate study, etc.

F. A professional development plan to help staff formalize objectives for professional and sometimes personal development.

V. Appropriate INCENTIVES and REWARDS must be made clear and available. Possibilities include released time, promotions, direct stipends, salary increases, institutional recognition, and paid travel. However, I feel the opportunity to participate in personal and professional growth activities is perhaps the most important incentive we can offer, and that has been confirmed by community college staff in recent studies in Florida and Illinois.

VI. Adequate FUNDING must be made available to carry out the activities. Centra's study of two-year colleges indicates that 70 percent of all staff development funds come from institutional general funds. Grants from the federal government or foundations amount to 16 percent, and direct funds from the state amount to 11 percent. Three percent comes from such sources as alumni or special funds.

VII. There must be an overall PROGRAM EVALUATION, including measurement of improvement in the development of individual staff members. There are three levels to consider:

Level 1 Immediate indicators, including attendance figures and direct feedback from participants.

Level 2 Changes in staff members' behavior. These changes are difficult to determine because so many variables enter in. Methods include self-evaluation follow-up interviews or questionnaires; and peer, student, and supervisor evaluation.

Level 3 Improved student development. The thesis of evaluation at this level can be stated this way: staff development leads to improved program and organization development which lead to improved student development. This level of evaluation at present demands more measurement sophistication than we can now manage, but it is an important goal for the future.

Close attention to these steps will help insure the organization of staff development programs that actually work. Staff development is one of the best opportunities that we have in the community college for meeting our goals and purposes.

Terry O'Banion, Executive Director
The League for Innovation in the Community College

For further information

O'Banion, Terry, Organizing Staff Development Programs That Work, AACJC: Washington, D.C., 1978.

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